R E P O R T R E S U M E S

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PERIODICALS AUTOMATION AT MIAMI-DADE JUNIOR COLLEGE.

BY- EYMAN, ELEANOR G. AND OTHERS
PASADENA CITY COLLEGE, CALIF.

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THIS PLAN FOR AN AUTOMATED PERIODICAL SYSTEM DEMONSTRATED THAT AUTOMATED RECORDKEEPING IS DESIRABLE AS WELL AS FEASIBLE. BASED ON AN IBM 1620 COMPUTER (A PUNCHED-CARD READER AND PUNCH, A PAPER-TAPE READER AND PUNCH, A LINE PRINTER AND TWO MAGNETIC DISK DRIVES), THE SYSTEM IS DESIGNED TO GIVE A WEEKLY HOLDINGS PRINTOUT, A WEEKLY CLAIMING REPORT, A MONTHLY RENEWAL LIST, AND A MONTHLY BINDING REPORT. UPON REQUEST, AN ALPHABETICAL TITLE LIST AND A SUBJECT LISTING CAN BE SUPPLIED. THIS ARTICLE WAS PUBLISHED IN THE "LIBRARY RESOURCES AND TECHNICAL SERVICES," VOLUME 10, NUMBER 3, SUMMER 1966. (HS)

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UNIVERSITY OF CALIF.
LOS ANGELES

JAN 13 1967

CLEARINGHOUSE FOR
JUNIOR COLLEGE
INFORMATION

Periodicals Automation at Miami-Dade Junior College

ELEANOR G. EYMAN, *Acting Director, North Campus Library and others**
Miami-Dade Junior College Library
Miami, Florida

from: Library resources and technical services, 10:341–361.

FOR TWO REASONS, the Miami-Dade Junior College Library decided to automate its periodical files prior to those of circulation, acquisitions, or cataloging. First, periodical records are more easily separated from other library data; and second, the authenticity of the files had been jeopardized by extremely rapid growth and by having been supervised by a number of people, each of whom had introduced various codes and symbols which collectively assumed a hieroglyphic aspect to the user. To compound the confusion, separate filing systems had been

* Charles C. Fridlin, Systems Analyst; S. Bruce Olson, Programmer; Samuel M. Baker, Jr., Head, Periodicals Department; and Asa B. Pieratt, Assistant Periodicals Librarian.

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developed for holdings: internal and public. In too many instances these files were at variance, a situation which was confusing both to patrons and to periodicals personnel. Separate internal files were maintained for binding records, claims, and renewals. A number of sub-files were also in existence. Consulting files began to consume inordinate time for both clerical and professional personnel. Add to this the necessity to verify conflicting information, and the total picture is disconcerting. Attempts to combine files were aborted, among other reasons, by inability to maintain growth of the collection while at the same time purging the data.

When the services of the Systems Analyst were made available to the Library Director, it was apparent to both of them that an automated periodical system could well test the claim that automated record-keeping is desirable as well as feasible. Many consultations took place between library staff and the Systems Analyst. That a mutual appreciation of demands, desires, and limitations developed without any disastrous capitulations is a tribute to the cooperation of both the incisiveness of the systems approach and the more cautious library attitudes.

The major problems were conceded to be: keeping abreast of claims; maintaining accurate, readable, up-to-date inventory files which would indicate whether the item was bound, unbound, or in microform; bindery control which would indicate color code, relevant information about the index, date sent to bindery, and cost. In addition, much additional information could be stored which could provide the faculty with information frequently requested, such as subject listing of titles, as well as a simple alphabetical title listing. At the present time our periodical subscription list numbers in excess of 1,100.

This system could be used by other institutions but would probably require changes and revisions to adapt it to different conditions and data processing equipment. At the present time, we have a 1620 computer, a punched-card reader and punch, a paper-tape reader and punch, a line printer, and two magnetic disk drives. This equipment limits the system to the handling of a maximum of 1,500 titles; however, with larger capacity equipment and the use of magnetic tape, there would be no limit to the number of titles which the system could handle. Based on this equipment and the problems being faced, a system was designed which would give the following:

(1) weekly holdings print-out
(2) weekly claiming report
(3) monthly renewal list
(4) monthly binding report

and upon request:

(5) alphabetical title listing
(6) subject listing.

These print-outs solved most of our problems. The weekly holdings print-out provides accurate, readable records for both the staff and patrons. The combined claiming report, renewal list, and binding report

removes the necessity of numerous files and the time and labor expended upon them.

The major problem faced was how to organize and gather the information for each periodical so it could be converted easily into computer language. Because of the distance traveled and storage space limitations, paper tape was chosen as the medium for communication and input to the computer. Punched paper tape is a more compact medium than cards and is less sensitive to humidity and rough handling. In addition to this, and perhaps more important, is the fact that tape lends itself perfectly to variable-length record format which is used to great advantage in reducing the size and amount of data prepared. Of somewhat lesser importance is the fact that paper-tape punching devices are quieter than card punches and therefore better adapted to a library environment. A paper tape punching machine was decided upon to convert the periodicals information to the computer's language. The paper tape punch is a machine consisting of an electric typewriter combined with a paper-tape reader and punch; it can also read and punch edge cards.

A Periodical Master File Sheet was then designed (see Exhibit 1) to accumulate the required information on each periodical. This sheet was designed to record information that will be used now and yet allow for information that may be needed at some future time. The information is written in coded form on the Periodical Master File Sheet (see Exhibit 2 for coding information). When the information is gathered on all of the periodicals, each Periodical Master File sheet is typed in title order on the paper tape machine, and a paper tape is punched. This paper tape is used to prepare the Master File on the computer's magnetic disk (see Exhibit 3).

Since information on the Master File for a given periodical may change, a Master File change procedure was designed (see Exhibit 4). This Master Disk File is sequentially organized, since the nature of the reports generated requires the processing of each record in sequential order. This would indicate a sequential storage medium such as magnetic tape rather than magnetic disk because little of the magnetic disk random access ability is used. Since our IBM 1620 System does not have magnetic tape capability, it is necessary that magnetic disk be used to provide the storage capacity required.

Part of the conversion process is the preparation of an edge-punched card for each periodical (see Exhibit 5). The edge-punched card is punched on the paper-tape punching machine as the operator types the periodical name and code number on a gummed label; this label is then placed on the edge-punched card for identification and filing purposes (see Exhibit 6). This file of edge-punched cards is used for up-dating the holdings records. The old holdings cards had notations which indicated whether a title was to be put on display, to be shelved with the unbound journals, to be discarded, or routed. These notations were transferred to the edge-punched cards, eliminating the necessity for maintaining a second directional file. Thus, in effect, the edge-punched cards assumed all the functions of the old holdings file.

After the computer master file is created, a Periodical Inventory report is printed (see Exhibit 7). Each week the Library forwards to the computer center a tape containing the periodical code number and the issue date for all periodicals received during that week. This tape is prepared by entering the edge-punched card for the periodical received into the paper-tape machine. This causes the periodical name to be typed and the periodical code to be typed and punched automatically into the paper tape. The issue date is typed by the operator on the keyboard of the paper-tape machine, and it also is punched into the paper tape. The paper tape is then read into the computer, and a new up-dated inventory report is prepared (see Exhibit 8). Four copies of this report are put into binders and placed in the Library for student and faculty use in locating periodicals.

Each week, after the inventory report has been prepared, the computer prepares the claims report (see Exhibit 9). This lists the title, the issue due, and the name and address of the source for each periodical title that should have been received but which did not arrive.

Each month, two additional reports are prepared by the computer center. The Renewal Report (see Exhibit 10) informs the Librarian four months in advance what periodicals need to be renewed, when the subscription expires, the price of the subscription, and the source of the subscription. The Binding Report (see Exhibit 11) informs the Librarian which periodicals are due to be bound the next month, the color of the binding, which indexes have been received, which indexes should have been received, the method of receipt of the index, and price, if any, of index.

Upon request, the Computer Center will prepare an alphabetic listing (see Exhibit 12) of all periodicals which are being received by the library. Also, upon request, a subject listing (see Exhibit 13) will be prepared, giving the subject heading and all periodicals that the library receives which deal with that particular subject. Each periodical can be listed under five different subject headings (see Exhibit 14 for subject headings).

Due to the number of cumulative man hours and computer time represented by the disk file, a back-up procedure has been designed into the system. Before any operation is attempted that will change the Master Disk File, a copy is made on a back-up disk pack. This will allow regeneration of the Master File in the event that something occurs to damage the data on the file. This protects the Master File from errors induced through bad data, machine or operator errors, or unforseen program situations. The contrast in appearance between the large illegible Kardex file and the compact, eminently readable computer print-out sheets is notable. The staff encounters no demands on its time for interpretation of data.

EXHIBIT 1

PERIODICAL MASTER FILE

1. Periodical Title	_____	Annals of the Academy of Political & Social Science
2. Periodical Code	_____	7,500,000
3. Order Date	_____	070065
4. Publisher's Name	_____	Amer. Acad. of Political & Social Science
5. Publisher's Address	_____	3937 Chestnut St., Philadelphia 4, Pa.
6. Beg-Exp of Subscription	_____	060065 to 070065
7. Source	_____	01
8. Subscription Status	_____	1
9. Price	_____	1000
10. Discount Price	_____	1000
11. Our Price	_____	950
12. Method of Receiving Index	_____	1
13. Index Price	_____	
14. Frequency of Indexes	_____	
15. Latest Index Received	_____	
16. Date for Binding	_____	1
17. Color Code for Binding	_____	8820
18. Where Indexed	_____	1921
19. Frequency of Issue	_____	B101010101010
20. Days Early or Late	_____	21-
21. Unbound Inventory	_____	1925 0900 1957 0700 0900 1100 1958 0300 0500 0700 0900 1959 0500 0700 0900 1100 1965 0100 0300
22. Unbound Inventory at Bindery	_____	
23. Bound Inventory	_____	0327 0356 011960 121964
24. Microform Code	_____	
25. Microform Inventory	_____	
26. Day or Week Code	_____	3
27. Title Changed To	_____	
28. Former Title	_____	
29. Ceased Publication	_____	
30. Subject 1	_____	822
31. Subject 2	_____	694
32. Subject 3	_____	
33. Subject 4	_____	
34. Subject 5	_____	

EXHIBIT 2

PERIODICAL MASTER FILE EXPLANATION

1. *Periodical Title*
   An alphabetic field with a maximum size of 40 characters including spaces.
2. *Periodical Code*
   A numeric field with a maximum size of eight characters. Example: 12456013
3. *Order Date*
   A numeric field of six characters. Example: 011065
4. *Publisher's Name*
   An alphabetic field with a maximum size of 25 characters including spaces.
5. *Publisher's Address*
   An alphabetic field with a maximum size of 50 characters including spaces.
6. *Beg. & Exp. of Subscription*
   A numeric field of 12 characters. Example: 020065 010066
7. *Source*
   A numeric field of two characters denoting the source of the periodical. Example: 01
   Coding: 01—Mayfair Subscription Agency
   P. O. Box 126
   Teaneck, New Jersey, 07666
   02—Crossworld Books & Periodicals
   333 S. Wacker Drive
   Chicago 6, Illinois
   80—Direct
   90—Gift
8. *Subscription Status*
   A numeric field of one character. Example: 1
   Coding: 1—We are subscribing.
   2—We are not subscribing.
9. *Price*
   A numeric field of five characters. Example: 500 = $5.00
10. *Discount Price*
    A numeric field of five characters. Example: 450 = $4.50
11. *Our Price*
    A numeric field of five characters. Example: 425 = $4.25
12. *Method of Receiving Index*
    A numeric field of one character. Example: 1
    Coding: 1—Index is part of the periodical.
    2—Index is mailed automatically.
    3—Must request to be put on mailing list.
    4—No index.
    5—Each index must be requested.
13. *Index Price*
    A numeric field of five characters. Example: 1525 = $15.25
    If no price is indicated, the index is free.
14. *Frequency of Indexes*
    A numeric field with a maximum of twelve characters. Example: 11
    Coding:

JAN	0	JULY	6
FEB	1	AUG	7
MAR	2	SEPT	8
APR	3	OCT	9
MAY	4	NOV	10
JUNE	5	DEC	11

15. *Latest Index Received*

A numeric field with a maximum of two characters. Example: 1

Coding: Same as Item 14 above.

16. *Date for Binding*

A numeric field with a maximum of six characters. Example: 030610

Coding: Same as Item 14 above.

17. *Color Code for Binding*

An alphabetic field with a maximum of five characters. Example: 8884A

18. *Where Indexed*

A numeric field with a maximum of ten characters. This allows five codes to denote where the periodical is indexed. Example: 011219

Coding:

01—A. S. & T. Ind.	13—Leg. Per.
02—Air Un. Ind.	14—Lib. Lit.
03—Art Ind.	15—Lib. Sci. Abstr.
04—B[illegible].	16—Math. R.
05—Bio[illegible] Abstr.	17—Meteor. & Geoastrophys. Abstr.
06—Chem. Abstr.	18—Music Ind.
07—Educ. Ind.	19—P. A. I. S.
08—Eng. Ind.	20—Psycho. Abstr.
09—Fin. Ind.	21—R. G.
10—Ind. Med.	22—Sci. Abstr.
11—Ind. Sel. Per.	23—Amer. Hist. & Life
12—Int. Ind.	24—) thru) Allow for twelve more 35—) @ 50 ea.

19. *Frequency of Issue*

An alphabetic field with a maximum of 13 characters.

Coding: 1st Character

W—Weekly	Q—Quarterly
F—Fortnightly	S—Semi-Annually
T—Semi-Monthly	A—Annually
M—Monthly	I—Irregularly
B—Bi-Monthly	

Other 12 Characters

Each character equals one month: 1st January-2nd February—etc.

Codes: 0—No issue this month
1—One issue this month
2—Two issues this month
3—Three issues this month
4—Four issues this month
5—Five issues this month

If periodical is regular, the code will only be the one letter. If periodical is irregular, the code will be the letter and 12 characters.

Example: M MONTHLY-REGULAR
W 345424544454
M 101111000111

20. *Days Early or Late*

A numeric field of three characters. This denotes the number of days the receipt of a periodical differs from the issue date. Example: 10+

Coding: 10+ days early
10— days late

21. *Unbound Inventory*

A numeric field with a maximum of 180 characters.

Example: 196319640107011402oo

One year followed by another year denotes that we have the complete year; i.e., 19631964 tells we have all 1963 issues. The other numbers in the example denote month and day of issue; i.e., 0107

MONTH DAY JAN. 7

Monthly magazines would be like this: 0200—February

22. *Unbound Inventory at Bindery*

A numeric field with a maximum of 60 characters.

Example: 005400550119631219 64

This denotes Volume 54 to Volume 55 covering Jan. 1963 to Dec. 1964. If you have only one volume it would read: 000000550119631219 63

23. *Bound Inventory*

A numeric field with a maximum of 120 characters.

Example: 005200530119611211962

Coding: Same as for Item 22.

24. *Microform Code*

A numeric field of one character. Example: 1

Coding: 1 Microfilm
2 Microfiche
3 Microcard

25. *Microform Inventory*

A numeric field with a maximum of 60 characters.

Example: 005005101196012 1962

Coding: Same as for Item 22.

26. *Day or Week Code*

A numeric field of one character. Example: 1

Coding: Weeks of month coded 1-4.
Days of week coded: Sun. 1, Sat. 7.

This denotes the usual week of the month or day of the week that the periodical is published.

27. *Title Changed To*

An alphabetic field with a maximum of 40 characters, including spaces.

28. *Former Title*

An alphabetic field with a maximum of 40 characters, including spaces.

29. *Ceased Publication*

A numeric field of six characters denoting the date the periodical ceased publication. Example: 050164 denotes May 1, 1964.

30. —

34. *Subject 1-5*

Numeric fields of three characters. Example: 270

Coding: Starts with 005 accounting and proceeds through 985 zoology; i.e.,

005 Accounting
010 Advertising
015 Aeronautics
↓
985 Zoology

EXHIBIT 3

SYSTEM FLOW
MASTER FILE PREPARATION

The master file sheets are typed on the Paper Tape Punching Machine and a paper tape is punched.

This paper tape is read into the 1620 computer system and the Periodical Master File is created on the magnetic disk.

EXHIBIT 4

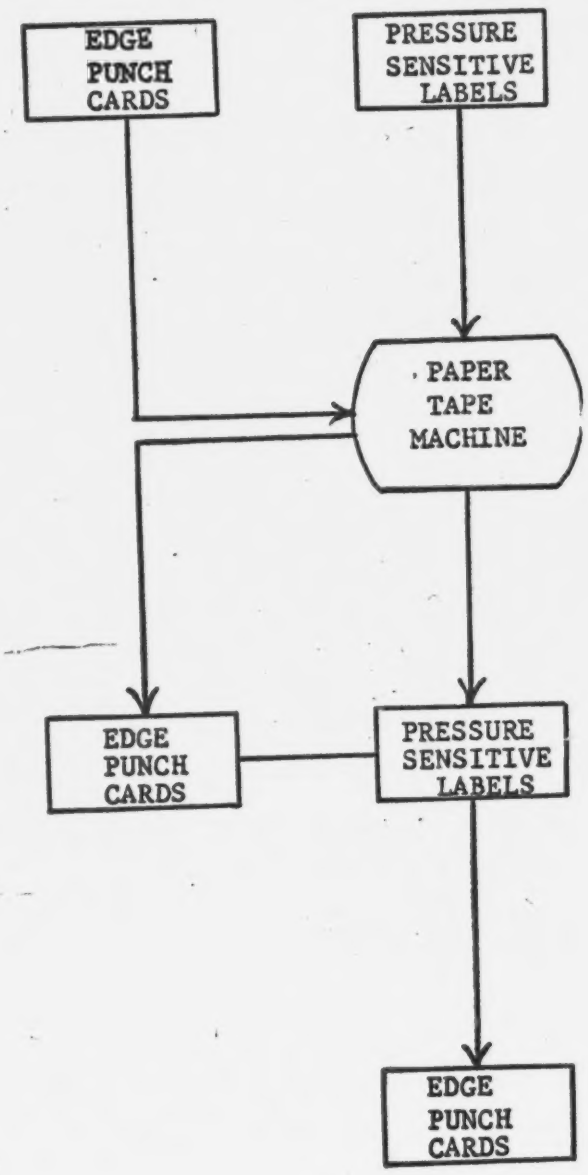
SYSTEM FLOW
MASTER FILE CHANGES

The master file sheet is typed on the Paper Tape Punching Machine, for those items of the periodical master file that need to be changed. This will punch a Paper Tape for each change containing the periodical code number, item number to be changed and the new information.

The paper tape is read into the 1620 and the master file on the magnetic disk is corrected.

EXHIBIT 5

SYSTEM FLOW
EDGE PUNCH CARD PREPARATION



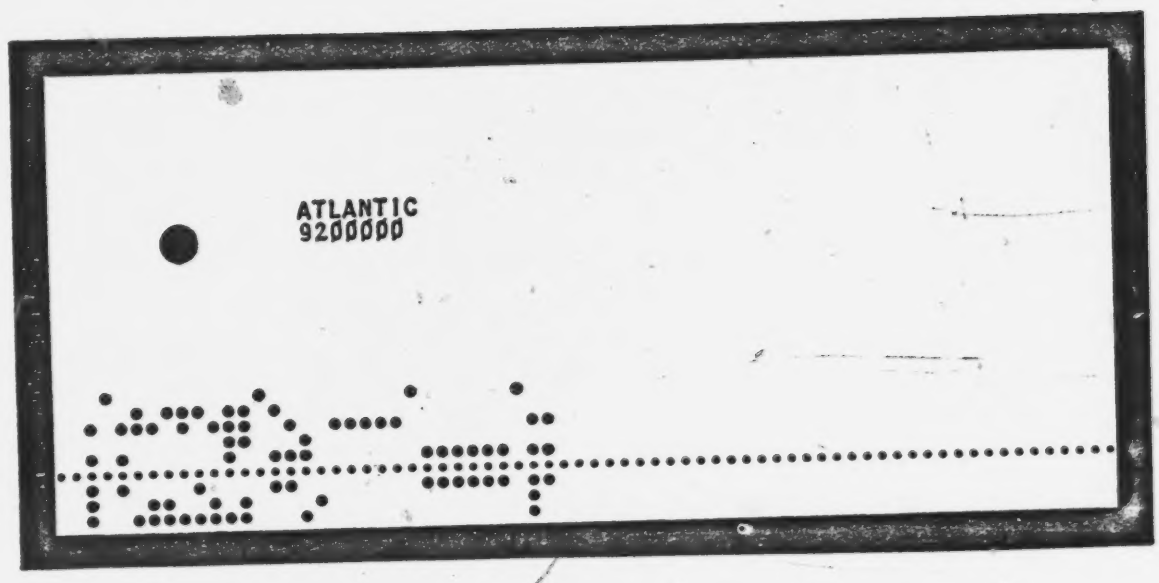
The edge punch cards are placed in the punch station of the Paper Tape Punching Machine and the labels are placed on the continuous form device on the typewriter of the machine.

The operator types the periodical title and number on the label, at the same time the periodical number is punched into the edge punch card.

The labels are put on the edge punch cards and filed by periodical title.

EXHIBIT 6
PERIODICALS AUTOMATION

EDGE PUNCH CARD



PUNCH PAPER TAPE

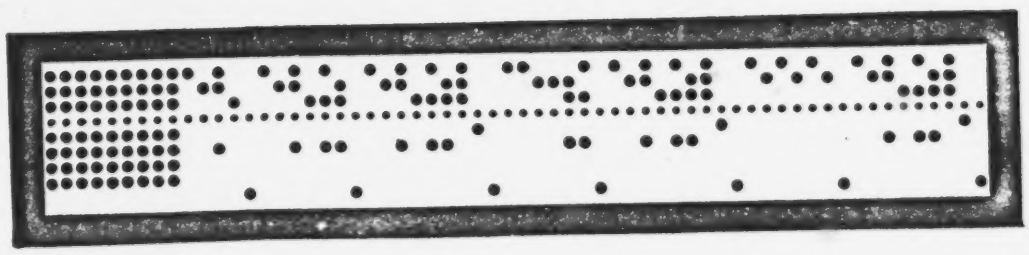
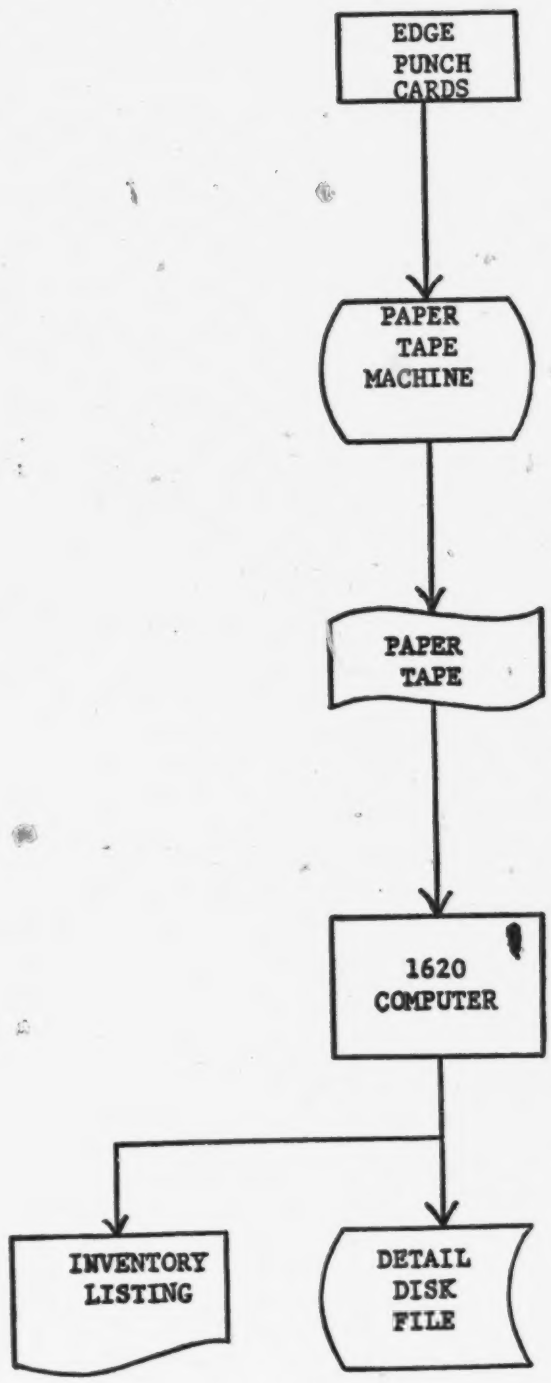


EXHIBIT 8

SYSTEM FLOW
WEEKLY RECEIPTS



When a periodical issue is received the edge punch card is pulled. This card is read into the Paper Tape Punching Machine.

The operator types the issue date and the machine punches a tape containing the periodical code number and issue date.

This tape is read into the 1620 computer. The master file on the disk is updated and an inventory listing is prepared.

EXHIBIT 7

JANUARY 1966 LIBRARY-PERIODICAL INVENTORY LISTING

ACCOUNTING REVIEW

UNBOUND

1965 JAN. 6

BOUND

VOL. 37 TO 39 COVERING JAN. 1962 TO DEC. 1964

AMERICA

UNBOUND

1965 JAN. 4, JAN. 11, JAN. 18

BOUND

VOL. 89 COVERING APR. 1953 TO AUG. 1953
VOL. 95 TO 99 COVERING APR. 1956 TO AUG. 1958
VOL. 101 TO 111 COVERING APR. 1959 TO AUG. 1964

EXHIBIT 10

JANUARY 1966 — LIBRARY-PERIODICAL RENEWAL REPORT

TITLE	EXPIRATION DATE	PRICE	SOURCE
AMERICA	JUNE 1965	$7.20	AMERICA PRESS 920 BROADWAY, NEW YORK, N. Y. 10010
AMERICAN ARTIST	JUNE 1965	$6.60	BILLBOARD PUBLISHING 2160 PATTERSON ST., CINCINNATI, OHIO
AMERICAN JOURNAL OF NURSING	JUNE 1965	$4.75	AM. J OF NURSING CO. 10 COLUMBUS CIRCLE, NEW YORK, N. Y. 10019

EXHIBIT 9

JANUARY 1966 — LIBRARY-PERIODICAL CLAIMS REPORT

TITLE	ISSUE DUE	SOURCE
ACCOUNTING REVIEW	JAN. 1965	AMERICAN ACCOUNTING ASSOC. SCHOOL OF BUS. AD. STATE U IOWA CITY, IOWA
AMERICAN ARTIST	JAN. 18, 1965	BILLBOARD PUBLISHING 2160 PATTERSON ST., CINCINNATI, OHIO
AMERICAN FORESTS	JAN. 25, 1965	AMER. FORESTRY ASSOC. 919 17TH NW WASHINGTON, D. C.
AMERICAN JOURNAL OF BOTANY	JAN. 10, 1965	BOTANICAL SOC. OF AM. INC. MONUMENTAL PR. CO. 32 ST. AND ELM AVE. BALTIMORE 11, MD
AMERICAN JOURNAL OF NURSING	JAN. 15, 1965	AM. J OF NURSING CO. 10 COLUMBUS CIRCLE NEW YORK, N. Y. 10019

EXHIBIT 12

JANUARY 1966 — LIBRARY-PERIODICAL LISTING

TITLE
ACCOUNTING REVIEW
AMERICA
AMERICAN ARTIST
AMERICAN BOOK PUBLISHING RECORD
AMERICAN ECONOMIC REVIEW
AMERICAN FORESTS
AMERICAN JOURNAL OF ARCHEOLOGY
AMERICAN JOURNAL OF BOTANY
AMERICAN JOURNAL OF NURSING

EXHIBIT 11

JANUARY 1966 — LIBRARY-PERIODICAL BINDING LISTING

TITLE	COLOR CODE	INDEX PRICE	INDEX DUE	LAST INDEX RECEIVED	METHOD OF RECEIPT OF INDEX
AMERICA	8817				PART OF PERIODICAL
AMERICAN BOOK PUBLISHING REVIEW	8815				REQUEST-INDEX
AMERICAN ECONOMIC REVIEW	8884				PART OF PERIODICAL
AMERICAN FORESTS	8841A		DEC. 1964	DEC. 1964	REQUEST-MAILING LIST
AMERICAN JOURNAL OF ARCHEOLOGY	8542				PART OF PERIODICAL

EXHIBIT 13

JANUARY 1966

LIBRARY-PERIODICAL SUBJECT LISTING

ACCOUNTING

ACCOUNTING REVIEW
JOURNAL OF ACCOUNTANCY
THE OFFICE

ADVERTISING

ADVERTISING AGE
ADVERTISING AND SALES PROMOTION
PRINTERS INK

ART

AMERICAN ARTIST
ART NEWS
INDICE DE ARTES Y LETRAS
SCHOOL ARTS

EXHIBIT 14

SUBJECT CODES*

4 ACCOUNTING
12 ADVERTISING
20 AERONAUTICS
28 AESTHETICS
36 AFRICA
44 AGRICULTURE
52 AMERICAN LITERATURE
60 ANTHROPOLOGY
68 ARCHAEOLOGY
76 ARCHITECTURE
84 ART
94 ASIA
102 ASTRONOMY
110 BIOLOGY
118 BOOKS
126 BOTANY
134 BUSINESS
142 BUSINESS EDUCATION
150 CHEMISTRY
158 CHILDREN
166 COMMERCE
174 COMMERCIAL ART
182 COMMUNISM
190 CONSTRUCTION INDUSTRY
198 CONSUMER EDUCATION
206 CRITICISM
214 CURRENT EVENTS
222 DRAMA
232 ECONOMICS
240 EDUCATION
248 ELECTRONIC DATA PROCESSING
256 ELECTRONICS
264 ENGINEERING
272 ENGLISH LANGUAGE
280 ENGLISH LITERATURE
288 EUROPE
296 FAMILY
304 FASHION
312 FINANCE
320 FLORIDA
328 FOOD INDUSTRY AND TRADE
336 FORESTS AND FORESTRY
344 FRUIT-CULTURE
352 GARDENING
360 GEOGRAPHY
368 GEOLOGY
376 HIGH-FIDELITY SOUND SYSTEMS
384 HISTORY
394 HOME ECONOMICS
402 HOSPITALS
406 HOTEL-MOTEL MANAGEMENT
410 HUMANISM
418 HYGIENE
426 INSURANCE
434 INTERIOR DECORATION
442 INTERNATIONAL RELATIONS
450 JOURNALISM
458 LABOR AND LABORING CLASSES
466 LANGUAGE AND LANGUAGES
474 LAW
482 LEADERSHIP
490 LIBRARIES
498 LITERATURE
516 MANAGEMENT
524 MANUFACTURES
532 MARKETING
540 MATHEMATICS
548 MEDICINE
556 MENTAL HEALTH
564 MILITARY ART AND SCIENCE
568 MORTUARY SCIENCE
572 MUSIC
580 NATURAL HISTORY
588 NEGROES
592 NEWSPAPERS
596 NORTH AMERICA
604 NURSES AND NURSING
612 ORNITHOLOGY
620 PACKAGING
628 PARKS
636 PERFORMING ARTS
644 PERSONNEL MANAGEMENT
652 PHILOSOPHY

* The subject codes for the periodicals were set up by Samuel Baker and Asa Pieratt.

EXHIBIT 14

SUBJECT CODES

660 PHOTOGRAPHY
668 PHYSICS
676 POETRY
686 POLICE
694 POLITICAL SCIENCE
702 PRINTING
710 PSYCHOLOGY
718 PUBLIC ADMINISTRATION
726 PUBLIC RELATIONS
734 PUBLIC UTILITIES
742 PUBLIC WELFARE
750 PURCHASING
758 RADIO
762 REAL ESTATE
766 RECREATION
774 RELIGION
782 RETAIL TRADE
790 ROADS
798 ROCKETS (AERONAUTICS)
806 SCIENCE
814 SOCIAL PROBLEMS
822 SOCIAL SCIENCES
830 SOCIOLOGY
838 SOUTHERN STATES
846 SPACE FLIGHT
854 SPANISH AMERICA
862 SPEECH
870 SPORTS
878 STATISTICS
886 TAXATION
894 TEACHING
902 TECHNICAL EDUCATION
910 TECHNOLOGY
918 TEXTILE INDUSTRY AND FABRICS
926 THEATER
936 TRANSPORTATION
944 TRAVEL
952 UNITED NATIONS
960 UNITED STATES
968 UNITED STATES HISTORY
976 UNIVERSITIES AND COLLEGES
984 THE WEST
992 WIT AND HUMOR
998 ZOOLOGY